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U. S. Department of Agriculture

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FOTTLER, FISKE, RAWSON CO.
“The Seed Store”
12 & 13 Faneuil Hall Square
Boston, (9) Mass.



Your name has been added to our mailing list at your request and we shall be pleased to mail our Annual Seed Catalog as soon as it is off the press in January. We trust that you will find it of more than passing interest.

Food production is still of prime importance in these days of social unrest, and every one of us should conserve his resources. A home garden is the best means we know of solving that problem.

In this connection may we call your attention to this pamphlet, which we believe is full of helpful advice to every gardener, whether he be a novice or a past master. We commend it to your careful thought.

Our list of proven specialties is large, so we can only mention a few that we can confidently recommend. See our special offer found on the rear cover page.

ASPARAGUS ROOTS. Martha Washington.

BEANS. Bountiful Green Pod, Carpenteria Pole, Fordhook Bush, French Horticultural, Horticultural Cranberry, Kentucky Wonder, Kentucky Wonder Wax, Keeney's Rustless, Kidney Wax, Stringless Green Pod, Wardwell's Kidney Wax.

BEETS. Crosby's Egyptian (Special), Early Wonder.

CABBAGE. Copenhagen Market, Fottler's Brunswick, Danish Round Head, Warren Stone Mason.

CARROTS. Danvers Half Long (Special).

CAULIFLOWER. Fottler's Champion Erfurt.

CELERY. Boston Market (Special), Giant Pascal.

CORN. Crosby Extra Early, Golden Dawn, Mammoth Golden Dawn.

CUCUMBER. Rawson's Hothouse, Arlington White Spine.

LETTUCE. Black Seed Tennis Ball, May King.

ONION. Danvers Yellow Globe, Prizetaker.

PEAS. Gradus, Laxtonian, Telephone.

PEPPERS. Large Bell, Squash.

RADISH. Early Scarlet Globe, Crimson Giant Forcing.

SQUASH. Blue Hubbard, Prolific Marrow, Warted Hubbard.

TOMATO. Bonny Best, Stone.

TURNIP. Purple Top White Globe, Large Yellow Globe.

YOUR VEGETABLE GARDEN

THE Great War has thoroughly established the American vegetable garden. Tens of thousands of amateur gardeners having learned the value of fresh vegetables will never again willingly put up with the stale product from grocery or peddler's wagon. They have learned to take pride in their garden and they appreciate its economic and health value; economic because of the money saved, and healthful through the bodily exercise, the change of employment, and the palatable and nourishing food secured.

Unless vegetables are grown rapidly and continuously not only is their quality poor but quantity is sacrificed as well. The highest quality only should be the aim of every gardener and to assist him to that end is the object of this book.

Any one can have a good vegetable garden who will put into it the information given in these pages, using diligence and common sense. Don't hesitate to ask your expert gardener friend for information, if you are a novice, should you not find what you want in these pages. After you learn his methods use your own good common sense.

In one sentence we may spell success for the gardener: Prepare soil; use manure; buy good seed; cultivate the crop; control insects and diseases intelligently.

If you are prejudiced against certain vegetables, do not let that prevent your planting them—remember there are others of the family who may appreciate them. The distaste for certain foods often arises from a previous experience of inferior or over matured vegetables, and again from their not being cooked to your taste. Happy are those to whom all fresh vegetables are alike welcome.

The Garden Site. Many gardeners have no range of choice in the location of their garden, but if it can be so situated as to get the maximum sunshine, and in a well drained spot, disappointments will be fewer. Clean your land of weeds and rubbish. Such material will be greatly in the way when spading, sowing seed or hoeing.

Planning a Small Garden. Where space is limited one is apt to make mistakes unless he has planned out the most economical way of arrangement. Usually, one cannot afford to grow most of the vegetables which require a good deal of room, such as Corn, Potatoes and Pumpkins, or of similar kinds where the yield is comparatively light and the plant fruits but once.

Such things as Beans, early Peas, Radishes and Lettuce probably give the best returns on a limited space. Then it is possible by doing a little scheming to grow three and four crops on the same land during one season. See "Companion" and "Succession" crops on page 5.

Even with a limited space, if given high culture, one can grow an enormous amount of food if he will devote time to planning so that all of the ground may be producing something throughout the entire season.

Soil and Manure. All soil should be made loose and friable; in that condition it is moisture holding, gives a greater chance for a well balanced root system, and provides for the proper aeration of the roots, besides making some of the plant foods available.

In order to make the soil loose, plenty of organic matter, such as manure or decayed leaves should be added to it. Where manure is difficult to obtain sifted coal ashes will assist in loosening the soil, but these will in no way add to the fertility. If it is possible, obtain well rotted stable manure, and apply it in the Fall. As soon as the ground can be worked in the Spring spade the manure in deeply and, at the same time, on very heavy soil give a coating of coal ashes.

Poultry and sheep manure are much more powerful than horse or cow manure in their action. It is better to use these later in the season, and apply it to such crops as should make good leaf growth, omitting its use upon crops which fruit, such as Tomatoes and Peas.

Fall Plowing Preferable. It is best to plow the garden in the Autumn, because the frost will pulverize the soil into fine mealy particles. Autumn plowed land dries out more quickly so that it may be planted earlier. Have the garden spot plowed deeply and the furrows cut narrow. Many of the root crops go deeply; they will enjoy thorough preparation. If you are plowing new land, especially that which has been in sod, you must not expect too much the first year. Such soil will grow Beans, Potatoes, Corn, Cabbage and Tomatoes better than some of the other crops. The constant stirring of the soil in growing the Potatoes and Corn will fit it nicely for better results next year.

Spading. It is difficult to spade anything but the smaller gardens, but there is little doubt but that thorough spading is more efficient than plowing. The sandier soils will allow spading much earlier than the heavy or clay soils. Soil which adheres together in a heavy lump is too wet for working. Allow such soil to dry a little more, because if too wet the clods will often remain unbroken throughout the whole summer, baking harder and harder as they become dry.

Fertilizers. When manure is unobtainable, other fertilizers may be used. Bonemeal is specially valuable in the root crops. Nitrate of soda is useful to push along the leaf growth. Commercial nitrogen fertilizers are powerful, and great care should be taken to use them in weak dilutions. One tablespoon of nitrate of soda should be used to three gallons of water.

Lime. The use of slaked lime will be found highly beneficial. It seems to make the heavier soils loose; it affects the sandier soils and makes them more moisture-holding; it sweetens the sour soils and, by its chemical influence with certain of the substances in the soil, it renders available a liberal share of the earth's storehouse of food. A 50 lb. sack to a plot 30x40ft. will be sufficient. Use in Spring after plowing. Rake in. Keep it off Potato soil.

Planting. Plant early as possible. Plant everything in rows. Use a garden line. Time spent in proper spacing of seeds will be well repaid when it comes to thinning out. The weeding and cultivation will be so much more easy to attend to. Let the rows run North and South in order that they may get the maximum sunlight.

In sowing seeds it is necessary to know just how deeply to plant. Never cover the finer seeds deeply; if you do they will not have strength to push up through the soil. Therefore, in sowing Carrot, Lettuce and Radish seeds make a shallow furrow with the tip of a small hoe. Sow the seeds rather thinly. After the seed is sown the furrow may be lightly covered with a small hoe, and then the soil should be slightly compacted.

Seeds of Peas and Corn are planted by hoeing out a furrow several inches deep, and after the seeds are sown the soil is best compacted by treading with the feet, should the ground be dry. Study to do your planting when the soil is just right—neither too wet nor too dry.

Seeds. The best seed is never too good. It is not worth the amateur's time to sow seeds of doubtful quality. Seeds should be purchased only from a reliable seedsman, who sends out his product with his name and trade mark and a reputation which he must protect. The very best culture cannot make up for poor seed.

Starting a Hotbed. With a hotbed many vegetables can be started right early. See pp. 8 and 9. Secure a load of fresh stable manure, shake out the coarse, dry bedding and wet the whole mass and turn over every day to induce even fermentation. Then lay down in layers well compacted in whatever form may suit the type of hotbed wished. It is quite important that the material heat well and uniformly and that it be spread out evenly. When thrown down in heaps and then leveled up and the soil added, sink holes are certain to develop and the heating will be uneven, both conditions combining to cause difficulty in keeping the soil uniformly well moistened.

The soil should be well fined and leveled before planting. Do not slope the soil to the front. It will be difficult to apply water without having it accumulate at the front side, leaving the rear side to dry out more quickly.

If the seed is to be sown directly into the soil, the layer should be about 4in. deep. This soil need not be especially rich, but must be of a loose and well fined character. Do not sow the seed until the temperature in the bed falls to about 90 deg. F., which should occur in about three days after it has been made up.

Transplanting. As soon as many of our vegetable plants are up an inch or so they should be transplanted, especially is this true of Cabbage, Cauliflower, Lettuce, Tomatoes, Peppers, Egg Plants and Celery.

Transplanting necessarily breaks the roots, but by so doing the plants are made to produce many fibrous roots which will be less injured when the plants are transplanted into the open ground.

If the plants have been grown indoors in heat they must be carefully and gradually subjected to the outdoor air by allowing them to have a little more each day; the term hardening-off is applied to this process.

A few hours before transplanting the plants should be thoroughly watered so that they may have a good ball of soil on their roots when they are set into the row. It will then be found advantageous to pinch back the ends of the leaves.

Many of the plants such as Lettuce, Celery, and plants which have crowns, should not be set too deeply, no deeper than they stood in their previous quarters, but spindling plants of Cabbages, Tomatoes and like plants may be set very deeply so that their appearance is better and, besides, such treatment gives them an opportunity to produce roots from the portion of the stem below the soil.

The Hoe vs. The Hose. From the very moment that the seed is sown or the plants are set in the field, the hoe must be ready for use. Keep the soil thoroughly pulverized, never allowing it to bake. One of the great benefits to the garden which comes from frequent shallow hoeings is that this operation surrounds the plants with a dustlike covering of soil which keeps the moisture from evaporating.

Nearly every person has seen how a lamp wick sucks oil up from the oil tank. The oil is lifted by a scientific principle known as "capillary attraction." The moisture in soil is lifted the same way. When soil is packed hard it acts as a wick, and the moisture evaporates when it reaches the surface. The dust cover, or dust "mulch," as it is called, stops this wick action and holds the water in the soil.

During dry spells, however, it is necessary to water the garden artificially for best results. Do not make the common mistake of watering the garden every day on the theory that if a little water is good for plants a lot is better. Wait until the plants show that they need water. You can safely water the garden at any time during the day when it is most convenient, but as a rule the benefit is greater immediately the sun is off the plants.

Thinning. Seeds of most plants have to be sown more thickly than the plants should be allowed to grow. This is because not all seeds have the germ of life within them, and it is desirable to plant a surplus so as to insure a sufficient number of plants. But when these plants, often coming up thickly together, are big enough to handle, they should be thinned out severely. It may seem heartless to destroy many good plants but those remaining will give a greater crop of a better quality.

Thin enough so that the roots of each plant has plenty of room to spread out and seek the plant food in the soil. By having the monopoly of all the food within its little area the plant will grow vigorously. This explains why it is important to keep out all weeds which attempt to share this plant food with the valuable vegetables. In thinning out allow these distances apart: Carrots, 2in.; Celery, 6in.; Endive, 8in.; Kale, 12 to 15in.; Kohlrabi, 6in.; Lettuce, 6in.; Onions, 2in.; Parsley,

4in.; Parsnip, 3in.; Peas, 2in.; Radish, 2in.; Salsify, 2in.; Spinach, 3in.; Turnip, 3 in.

Sanitation in the Garden. The pests of the garden are numerous and the home gardener must ever be diligent. Much can be accomplished in the control of insects and diseases that infest garden crops by careful sanitary management. In the Autumn, after the crops have been harvested, or as fast as any crop is disposed of, any refuse that remains should be gathered and placed in the compost heap, or burned, if diseased or infested with insects. Several of the garden insects find protection during the Winter under boards and any loose material that may remain in the garden. Dead vines or leaves of plants are frequently covered with spores of diseases that affect those crops during the growing season, and these should be burned, as they possess very little fertilizing value. Weeds often harbor the same insects and diseases as are destructive to the vegetables. A great amount of labor can be saved by burning the weeds in the Spring which have gone to seed; but it would be better to destroy these in the Autumn.

Preparedness. The wise gardener follows the old aphorism: "An ounce of prevention is better than a pound of cure."

In the garden, as in the world in general, the pacifist is supplanted by advocates of preparedness. Get a good spray pump. Stock up with insecticides and fungicides. Insects and diseases require vigorous treatment.

Plant Diseases. Plant diseases are never cured, but they can be prevented from spreading. One of the most common diseases of the garden is the blight of Potatoes. A spraying of Bordeaux mixture very early in the Spring and several times later during the season, may keep this blight in subjection. Bordeaux mixture is frequently mixed with arsenate of lead, and this double-purpose spray serves to keep both the blight disease and the Potato bug under control. Powdered sulphur and various solutions of copper are among the substances used to control other diseases. Gardeners should watch all their crops closely and, if unacquainted with the means to be used to combat diseases or insect pests, they should immediately consult a good book on this subject or their seedsman as to what to use. There are obtainable from the seedsman standard preparations for all troubles; these are ready for use and so easy to handle.

Beetles, Caterpillars and Worms. There are two sorts of insects which bother all gardens; the first sort have chewing mouth parts to which belong the whole class of beetles, caterpillars and worms. They eat the leaves, and if the leaves have poison spread upon them, they take the poison along with the leaf. Nothing is so good for this class of insects as arsenate of lead.

Aphids or Plant Lice. The second class of insects have piercing and sucking mouth parts. The plant louse and green fly or aphis is an example of this sort of insect. They are controlled by spraying with some solution containing nicotine or with Kerosene Soap Emulsion. In controlling plant lice it is absolutely necessary to hit the bug with strong force, and so clog its pores with the solution that it will be suffocated. As there are a great many generations born each season frequent spraying is absolutely necessary. The adherence of nicotine preparations to the plants will be increased by using these in a soap solution made by dissolving one ounce of Ivory or other laundry soap in five quarts of boiling water. In all questions of the controlling of insects and diseases it is best to consult a good book on this subject or your seedsman.

Insects in the Soil. Some insects, which are found in the soil are difficult to control, and the best precaution is to plant the crop in a different place each year, thereby evading the pest. Especially is this true of Radishes, which are affected by a Radish worm. Sometimes root lice are found; these may be controlled by placing tobacco stems along the rows.

Borers. There is a large class of boring insects which are very destructive in the garden. Unfortunately these borers cannot be killed by sprays. They get inside the stem where we cannot reach them. Squash can often be saved by covering the vines at each joint with soil, in order to encourage these to root. If one wishes to go to the trouble he can use a small penknife and dig the borer out of the stem by merely making a slight longitudinal cut. Usually the plant is not killed by this operation but it would surely die if the borer were allowed to work. A borer is known to be at work when the foliage suddenly wilts and turns yellow.

Companion Crops

Crops which may be planted together in the same space and occupy the same ground together are known as companion crops.

Between the rows of early Cabbage may be planted Lettuce or Radishes.

In the row with Onions, Parsnips and Carrots, Radishes may be sown thinly.

Lettuce may be sown between Tomato plants.

Radishes in rows between String Beans.

Squash may be planted among early Sweet Corn.

Onion sets may be planted between the early Cabbage.

Radishes, early Beets, early Carrots and early Turnips and bunch Onions, may be planted between Peas.

Pole Beans may be planted with early Corn.

Early Potatoes may be planted between Melon rows.

Succession Crops

Succession crops are those which follow each other.

Celery may follow early Peas, Beans, Radishes, Lettuce, Onions, Spinach, and other crops.

Turnips may be sown in any land which is made vacant by the early crops.

Beans or Turnips can be planted between rows of early Sweet Corn.

Early Potatoes may be followed by early Sweet Corn, Celery, Beans, Beets, Carrots, or Spinach.

Lettuce may be followed by Summer Radishes, and these by Beans and the Beans by Spinach.

Lettuce may be sown throughout the season.

Tomatoes, Peppers, Beans or Sweet Corn may follow Onion sets.

Early Peas, Beets, or Potatoes may be cleared away for Turnips, String Beans, or Winter Radishes.

Leaf Lettuce may be followed by String Beans, and then by Fall Turnips.

Spinach may be followed by early Sweet Corn, String Beans, or Cabbage, and then Fall Radishes or Lettuce may be sown.

Spinach may be followed by Winter Squash.

QUANTITIES SEED REQUIRED

Vegetable	Amt. of seed	Will give or plant	Space between rows	Space in rows
Asparagus.....	1 oz.	800 plants	36 in.	18-24 in.
Beans, bush.....	1 qt.	100 feet	24-30 in.	4-6 in.
Bean, pole.....	1 qt.	100 hills	36-42 in.	36-42 in.
Beet.....	1 oz.	50 feet	12-15 in.	3-4 in.
Cabbage, early.....	1 oz.	1500 plants	24-30 in.	15-18 in.
Cabbage, late.....	1 oz.	1500 plants	30-36 in.	18-24 in.
Carrot.....	1 oz.	100 feet	12-15 in.	2-3 in.
Celery.....	1 oz.	3000 plants	36 in.	6-8 in.
Corn.....	1 qt.	200 hills	36 in.	12 in.
Cucumber.....	1 oz.	50 hills	48-60 in.	60-72 in.
Egg Plant.....	1 oz.	1000 plants	30-36 in.	18-24 in.
Endive.....	1 oz.	150 feet	12-15 in.	8-10 in.
Lettuce.....	1 oz.	200 feet	12-15 in.	6-8 in.
Lettuce.....	1 oz.	2000 plants	12-15 in	6-8 in.
Onion.....	1 oz.	100 feet	11-12 in.	1-2 in.
Parsley.....	1 oz.	150 feet	12-15 in.	1-2 in.
Parsnip.....	1 oz.	150 feet	15-18 in.	2-3 in.
Pepper.....	1 oz.	1000 plants	30-36 in.	18 in.
Potato.....	1 pk.	200 feet	30-36 in.	15-18 in.
Pumpkin.....	1 oz.	25 hills	8-10 ft.	6-8 ft.
Radish.....	1 oz.	100 feet	12 in.	1-2 in.
Rhubarb (roots).....	—		30-36 in.	24-30 in.
Salsify.....	1 oz.	50 feet	15-18 in.	1-2 in.
Spinach.....	1 oz.	100 feet	12 in.	4-6 in.
Tomato.....	1 oz.	2000 plants	36-48 in.	36-48 in.
Turnip.....	1 oz.	200 feet	12-15 in.	3-4 in.

Beans and Peas

BEANS, Snappy.

Great care should be exercised in choosing varieties of Beans; the stringless are much to be preferred. Beans must not be planted until after all danger of frost. An ordinary soil which warms up quickly will be best for their culture.

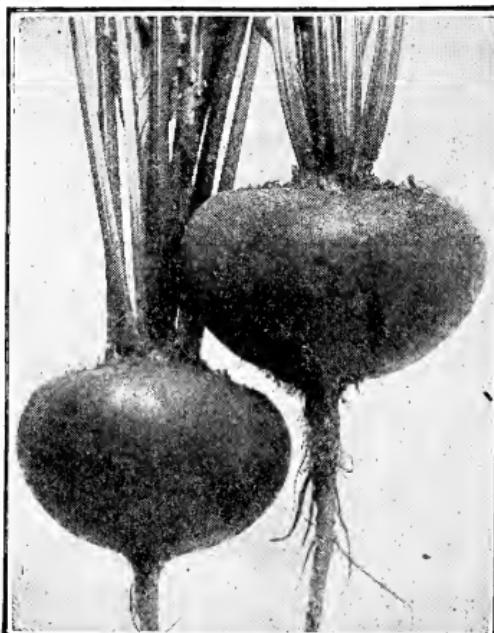


Do you know of any vegetable which gives such heavy returns for so little effort as Beans?

sown with the eye down. To eliminate the necessity of having to use poles Bush Limas may be planted; these latter are really preferable for the home garden.

PEAS, The Earlier the Better.

For the home garden, for ease of management, dwarf Peas are advisable. Bear in mind that the smooth Peas may be planted earlier than the wrinkled sorts. Just as soon as the ground can be worked the Peas should be sown.



Beets—Their growth should be unchecked to give that fine flavor for which they are so highly valued

Never cultivate Beans while the foliage is wet or covered with dew, because the Bean spot or anthracnose will spread very rapidly if carried on the clothing or hoe. Beans should be picked almost daily in order that each one may be gathered while it is still tender and stringless.

Pole Beans may be grown on a fence, especially one made of wire netting or, instead of being planted to single poles may be planted in two rows of hills, with poles 5 to 6 feet long, fixed in the center of each hill, with each set of four tied together, Indian tepee fashion.

LIMA BEANS.

Lima Beans should never be sown when the soil is the least bit cold, or when cold weather is expected. In order to secure maximum sprouting they should be

planted with the eye down. To eliminate the necessity of having to use poles Bush Limas may be planted; these latter are really preferable for the home garden.

The best method is to plant early varieties, two or three inches deep, in double rows, 12 in. apart. By so planting the two rows will help to support each other. There should be a space of two to three feet between the double rows.

The tall sorts will need some method of training, but they will produce a little more prolifically. These may be planted in single rows 3 to 4 ft. apart, or in double rows 12 to 18 in. apart, with a space of 4 to 5 ft. between the double rows. As Peas are a short season crop, successive sowings should be made. Whichever you prefer, buy only the very best varieties.

Root Crops

There are no vegetables so healthful and such good health regulators as root crops. With no other vegetables is it so important that growth be rapid and steady as with these root crops. Drought and slow growth result in woody, fibrous and unpalatable roots. For most of these crops a light soil is necessary to get good size, although in a clay soil the quality will still be excellent.

RADISHES, Must Grow Quickly.

Like Lettuce, Radishes may be sown as soon as the soil can be worked. The faster they grow the better; some are ready for use in three or four weeks after planting. Make the soil loose. Successive sowings every ten days will give a continual supply in the Spring. Many persons enjoy late Radishes; these should be sown in Midsummer or early Autumn.

BEETS Are Toothsome.

Did you ever wonder why Beets come up in clumps instead of singly? Each Beet seed pod really contains four or five seeds; for this reason Beets always need thinning. Beets are an early Spring crop, being safely planted when the danger of frost is past. Sown thickly in rows 1ft. apart they should be thinned to stand at first an inch apart, gradually increasing the distance to 3 or 4in. apart. The thinnings may be used as greens or transplanted. Three plantings will give a continuous supply.

CARROTS, Delicious for Summer and Winter.

The Carrot is an early crop and easily grown after it gets started. But the Carrot seeds are small and the young plants are weak, so the seeds should not be planted deeply, a half inch being enough. It is necessary to keep a dirt crust from forming over the seeds after they are planted, so it becomes desirable to mix a few Radish seeds in with the Carrot seed. Small Carrots have better flavor than large ones, so that they can grow 6 or 7 to the foot in the row without injury. Make the rows 1ft. apart. The Carrot is a slow grower, maturing in 8 or 10 weeks after planting. A continuous supply of them can be guaranteed by making new plantings every three weeks, or as late as August 15, although in hot dry weather they must be watered.

TURNIPS, Need Plenty of Space.

"On the 14th day of July, sow your turnips wet or dry," runs the old farm rhyme; but the ancient author of the verse perhaps never knew of the advantages of garden turnips in the Spring. In fact you may not only sow your Turnips early—as soon as the soil is ready for any crop—but preferably wait for a wet day. Damp ground makes the Turnip seed sprout well. Turnip rows even in a backyard garden where space is limited should be 15 to 18in. apart to allow the rank tops to spread out and still leave room for cultivation. A half ounce of seed will plant 100ft. of row. Plant the seeds a quarter inch deep. Because of the tendency of Spring Turnips to lose quality in warm weather, it is well to plant only a small portion of the total bed at once, planting again at intervals. When plants are well up, thin them so that they stand 3 or 4in. apart; the immature plants thus pulled out can be cooked for greens.

PARSNIPS, A Whole Season Crop.

Sow Parsnips early; just as soon as the soil is right. They will be ready for use in November but hard freezing improves their flavor. The seed is slow to sprout. It is often well to sow Radish seed in the row with it. The Radishes in coming up break the crust of soil over the Parsnips. The success of the crop often depends upon breaking the soil over the row by this method or by using a rake. The roots may be dug in the Fall and stored in garden pits covered with earth or else left out over Winter and dug in the Spring.

Model Vegetable Garden

50 feet wide, 100 feet deep

WEST

Well up out of the way--in this section if possible--plant

Before looking over the working plan of "Model Vegetable Garden" herewith, first read most carefully the remarks thereon which follow:

On large estates, where a gardener is employed, it is customary to plant for an excess of every vegetable. This simplifies matters—for the gardener.

On restricted areas, what to plant and how much space to allot to each vegetable or fruit, becomes a problem which no one can solve except those at interest. Some families want a little of this, and a lot of that. And the planter should provide accordingly.

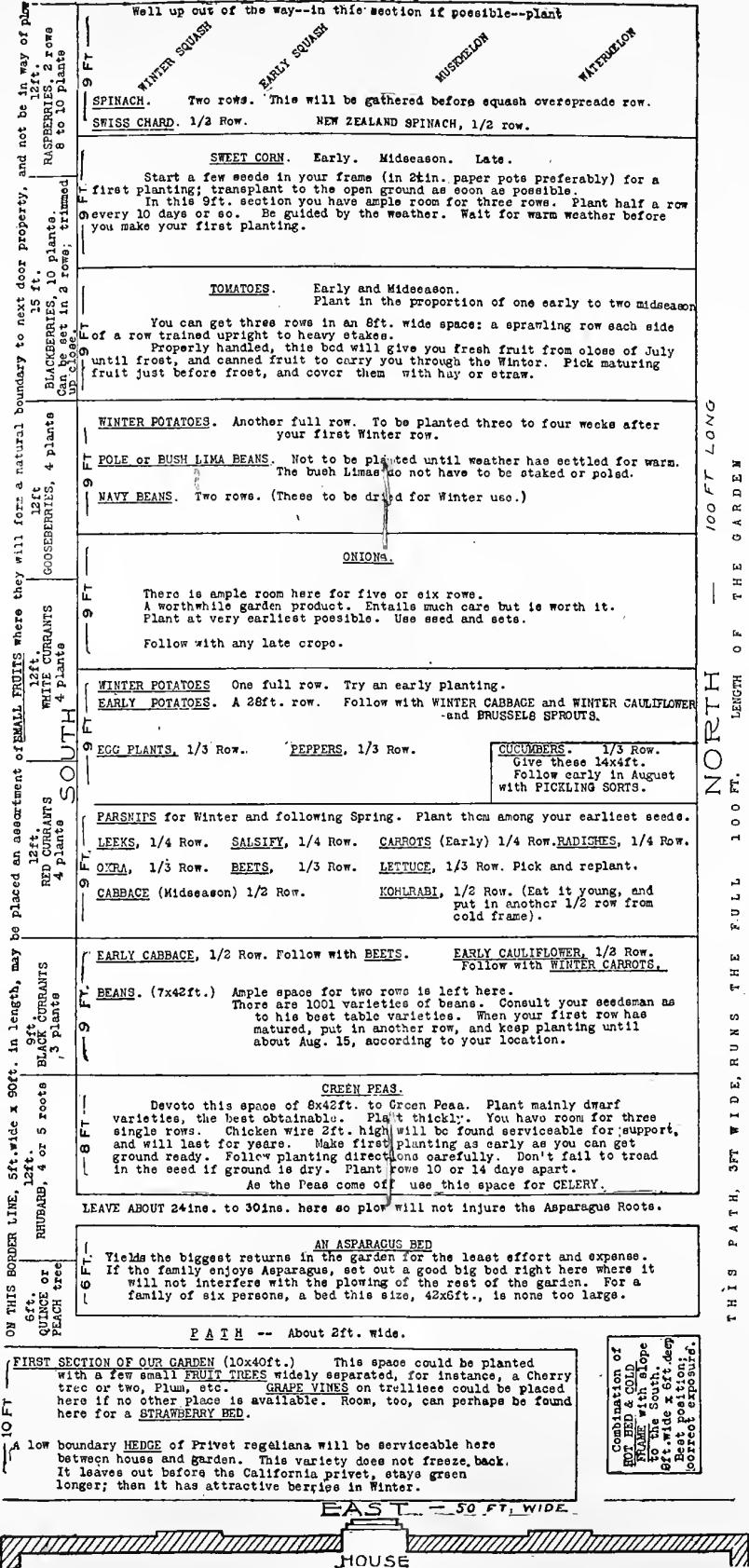
The main point to realize is that from the day you get on the ground until frost comes your garden can be made to furnish some food—fresh, wholesome food—for your table.

Comparatively few old hands at the game make garden plans. They simply put in their seed as fast as the season allows, having due regard to space requirements, height of plants so one line will not overshadow the other, cropping conditions, etc., until their plot is filled. Just as quickly as a crop matures the ground is cleared, re-prepared, and another sowing made. It is here that the hotbed or coldframe plays well its part.

Early in the season, four to six weeks before you can get on the ground, your frame can be working for you. This will average, at that time of the year, one month gained. After you have transplanted into the garden the contents of the frame, you seed it up again, so that when your first crops have matured in the open ground, your frame will furnish another lot of plants ready to set out.

A 3ft.x6ft. frame will hold a variety of young plants, but we advocate a frame 9ft.x6ft. (three sash) for the reason that it will give you returns of exceeding value for eight months out of the twelve.

Using heavy mats in



the early Spring for frost protection, you can start in your frame, by degrees, the following:

1. (Of the following sorts you will need the most)—Lettuce; Tomatoes; Cabbage; Cauliflower; Egg Plants; Peppers; Kohlrabi; Celery; Sweet Corn (in $2\frac{1}{2}$ in. paper pots).

2. (Raise a few to make a start on)—Onions; Beets.

3. (Plant on pieces of thick sod, grass side down)
—Lima Beans; Melons; Squash; Cucumbers.

As you empty the frame of the first lot of young plants you can put in Lettuce, and more Lettuce, late Cahhage, late Cauliflower, Brussels Sprouts, Kohlrahi, Carrots, Beets.

If you are partial to Tomatoes, Egg Plants, Peppers, or other favorites, you may allow a few of each to develop right in the frame after you have forced your early plants for the garden.

Later, this same frame will give you Lettuce until long after the early frosts.

Celery will fit best into the space allotted to green Peas, after these have passed. Transplant the Celery into rows in open ground as soon as it has a fair tap root; a month later again transplant, setting plants 4ins. apart; a month later transplant with half of earth into permanent trench.

Likewise, Turnips and Brussels Sprouts may follow in the Onion section, along with other later plantings.

Notice that the Asparagus, Rhubarb and small fruits are planted in areas where they will not be disturbed by spading or plowing.

The garden we have plotted out on this page is simply a suggestion. It is 50ft.x100ft. By doubling the width of the spaces you can fill a plot 100ft.x100ft., or by halving it to 25ft.x100ft., you can reduce pro rata.

Regulate the size of
your garden by your
strength, experience, free
hours, and the assistance
you can obtain from your
family.

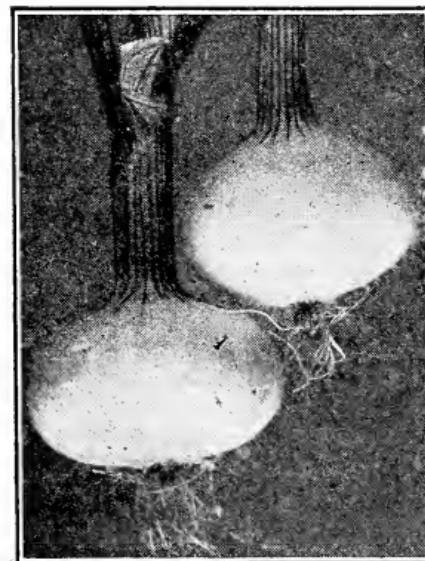
Healthful Onions

"An Onion a day and no doctor you will pay." The Onion is one of the most healthful of all vegetables—it can be made ready for the table and served in so many ways. If we do not relish its flavor when prepared one way, we may when prepared in another manner.

A rich loose soil, heavily enriched with manure, is an absolute essential for good Onion culture. The seed is sown as early in the Spring as possible, so that a long season may be

available for their growth. They will need constant cultivation, and the most careful weeding. As the young Onions obtain any size they should be pulled and used for the table; in this way they are kept thinned out until they stand one to two inches apart in the rows.

By September 1 they should have attained such size as to make them valuable for storage throughout the Winter. Some gardeners claim that if in the latter part of the Summer the tops are bent over, the bulbs will increase rapidly in diameter. When pulled in the Fall they can be left on the ground to ripen, or they



Onions—The little youngsters (thinnings) for a breakfast relish; the real big ones for Fall and Winter

may be placed in some sunny location where the tops will thoroughly dry.

Onion sets may be employed instead of seed, and should be set about 2 or 3 in. apart. They may be planted in the Fall in a spot which is not disturbed in the Spring. Onion sets planted in Spring will furnish a good crop of Onions early.

Egyptian, or hardy sets, may be planted in August or September for an extra early Spring crop of green Onions.

Celery

Celery is a muck soil crop, but it will grow on any soil which is heavily fertilized, and to which plenty of water can be supplied. The seed should be started in small boxes or in a seed bed, and there should be early and late sowings; the early in the hotbed during March, and for the later crop the

seeds should be sown in April. In order to hasten the germination of the seed a covering of burlap will retain the moisture so that the seeds will start growth readily. The plants should never be set out in the garden closer than 6 in., and 3 ft. apart in the rows for the early and a little farther apart for the later crops. Give the best cultivation through the season, because if the growth is checked in any way through the lack of water, or crusting of the soil, the plants will not make a desirable growth.

The early crop is bleached either by banking up the soil about the plants, using boards, or by wrapping heavy paper about them.

The later crop can be readily blanched by taking up the plants and packing them together in a trench so that the leaves are just above the level of the soil. As the Winter approaches cover trench with boards and heavy coating of leaves.



Celery—A health product and valuable every day to the housewife

Cabbages— May be Used in Many Ways

Cabbages are a profitable crop, and may be put to many uses; cooked or raw they are equally palatable, and made into sauerkraut Cabbage seems a different vegetable than when prepared in other ways.

Properly cooked Cabbage is delicate and digestible. Over cooking of Cabbage makes it indigestible. Young Cabbage should never be cooked longer than 30 minutes; Winter Cabbage not over 45 minutes.

Cabbage is a heavy feeder and a quick grower. For that reason it should have rich soil, if possible, and if the planting is done early enough in the Spring it is possible to get two crops from the same land. Cabbage does well in heavy soil—particularly late Cabbage—and for that reason is likely to thrive in a backyard garden.

Cabbage—Grow the hard heading, tender varieties—Early, Midseason and Winter

Cabbage plants are improved by transplanting. For late Cabbages, the seeds should be planted in a small outdoor bed in May. Plant the seeds in rows about 3in. apart. When the seedlings come up they may need thinning, the excess plants being transplanted to another bed if desired.

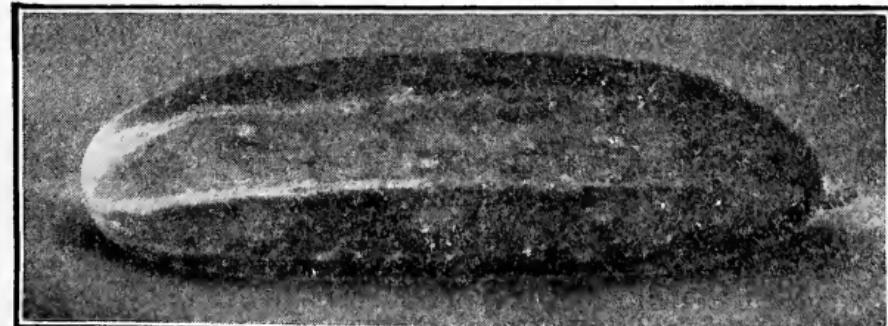
In July transplant these seedlings to the garden, placing the plants 18in. apart in rows 3ft. apart or slightly less. The same method of transplanting should be followed with the early seedlings which you have bought or grown in indoor seed boxes.

Cucumber, Squash, Pumpkin

These crops are tender to the cold. They enjoy a loose, richly manured soil, although Cucumbers may be grown on almost any garden soil, providing that there is good drainage. The Striped Cucumber bug is its greatest enemy. If one prefers to get an early start the seeds may be sown in paper pots indoors, or later in the season in a hotbed. An excellent method of getting good Cucumbers is to place a large shovelful of decayed manure beneath each hill. The roots will strike deeply for this food. Several varieties should be grown so that some may be available for pickles, and others, larger varieties, for the table. Cucumbers rarely need more than 4 to 5ft. between the hills when only three or four plants are left to each hill.

For the small garden the bush Squash is beginning to be grown more than the vine sorts. Every gardener who attempts to grow Squash should grow several sorts. Bush Squash needs 4 by 5ft., while the late Squashes require at least 6 by 8ft.

Pumpkins may be planted in the garden among the corn or in some out of the way place where they may have an opportunity to run. They should be planted at least 8 by 8ft. Easy to grow and worth having for Pumpkin pie.



Cucumbers—Like this for the table; smaller ones for pickling

Potatoes

A few years ago it might have been thought that Potatoes would take up so much land that they should not be grown in the small home garden, but today the home gardener feels himself extremely lucky when he can grow a row of Potatoes, especially the very early ones, for they are as valuable as any crop in the garden. Then your own taste best.



Even though your garden be of limited area, grow at least one or two rows of Potatoes. None you buy ever taste half as good

so much as does the Potato. As soon as bloom the soil should be heaped about them a little, for it is now that the tubers are beginning to develop.

Much of the success in growing Potatoes will be due to diligence in spraying for the Potato bugs and blight. This should be done every ten days after the foliage has well developed. Use Bordeaux mixture and arsenate of lead. The most careful watch must be maintained for all insect troubles, and particularly for the aphis which, unchecked, will ruin a crop in less than a week. Use nicotine or Kerosene Soap Emulsion for aphis.

Leeks Deserve Greater Notice

Leeks deserve wider acquaintance. They are milder than Onions and are delicious when served as a boiled dish. When planted deeply, so that the long bases are blanched, the tops and blanched portion are cut into inch lengths, parboiled and served like creamed Onions. They are extensively used for flavoring soups and meats. Seed should be sown in a very well prepared rich soil. They are readily transplanted and when placed 5 to 6in. apart and thoroughly cultivated like Onions they grow to large size. During the growth the soil may be banked about the rows; so doing will blanch them and make them tender. It will require the whole season for their proper development. The Leek, like Celery, is stored in the cellar, being set deeply in soil.

Okra

This plant is sometimes called Gumbo. As a vegetable for flavoring and soups the young Okra pods are delicious. The plants are tender to cold soil and should, therefore, be set in the Spring only, when the soil has thoroughly warmed. The plants should stand 12 to 18in. apart and prefer good sun. The pods should be picked when tender before they are thoroughly matured.

Potatoes enjoy a light soil which has been converted into the very best physical condition. The Potato should be cut so that one strong eye is left on each piece. Too many eyes to a cutting make for foliage but not for Potatoes.

To guard against blight, soak your seed Potatoes in a solution of Formalin before cutting them up for seed. Potatoes require manure in quantity.

They should be planted in rows 3ft. apart and 15in. apart in the row. Plant early varieties about 3in. deep; late varieties 4 to 5in. deep, according to your soil.

No crop enjoys continual cultivation as Potatoes begin to

Tomatoes— Everybody's Favorite

All Tomato plants should be started in hotbeds, cold-frames or in a window. Young plants can be had from your seedsman.

It is highly advantageous to have some real large plants to set in the garden as soon as danger of frost is past. By the proper choice of early and late varieties, a succession of good Tomatoes can be had, better than if only one variety is grown.

They should be set deeply so that they do not stand above the soil spindling and leafless.

Tomatoes should be planted 24 to 36in. apart in the rows, which rows should be 3 to 4ft. apart. As they grow they should be trained on stakes or regular Tomato supports. This will not only keep them from being soiled by lying on the ground, but it will prevent the fruits from decaying. There are many methods of training Tomatoes, each one of which seems to be successful. Consult your seedsman.

For earliness and superiority of size of fruits all suckers should be pruned out and the tomatoes trained to a single stem.

For the housewife who prefers to have some green Tomatoes for pickling and other culinary uses, most of the suckers should be removed, but three or four stems may be allowed to remain on the plant.



Tomatoes—Practically every house-keeper's long suit. Easy to grow; its reward for a little care is prodigal

Sweet Corn

The home gardener who has not grown Sweet Corn does not know what absolutely fresh Sweet Corn tastes like, for it should be picked and hurried to the kettle.

Have a good rich soil, and plant one kernel every 6in. Thin out to 12in. apart and allow 3ft. between the rows. When planted too closely or when too many seeds are placed in a hill, Sweet Corn is not so successfully grown as when planted as advised. If planted about one inch deep the seed will readily germinate, and cultivation should begin at once; at first the cultivation should be fairly deep but, later, as the roots get larger, these will gradually come nearer the surface, and the cultivation should be more shallow, soil being hilled about the rows; all side shoots should be removed. Corn should be planted in succession; if possible, small plantings should be made every week or ten days.



Grow a generous supply of Sweet Corn; it is rich in food value and never so tasty as when it comes fresh from your own garden

Greens Are Valuable

SPINACH.

Ordinary Spinach is really a cool season crop, and when cut several times is of little more use. It is much more advisable therefore to grow in the home garden such substitutes for ordinary Spinach as the New Zealand Spinach and Swiss Chard. The New Zealand Spinach is of entirely different manner of growth from the type, and should be sown as soon as all danger of frost is past. Its greatest recommendation is the fact that it grows best during hot weather, and a supply of Spinach may be obtained from Spring until frost if the young shoots are continually cut and not allowed to go to seed.

The New Zealand Spinach seed is very hard, so that the seed should be soaked over night before sowing.



Swiss Chard—You can cut it all the season through. Cook blades of the leaves as Spinach, and the midribs of the leaves as Asparagus.

SWISS CHARD.

Swiss Chard, or Leaf Beet is really a beet which develops many large tender leaves which have a heavy midrib. The leaves are boiled as Spinach, while the midribs of the leaves are creamed and served as mock Asparagus or Celery. If the outer leaves are cut throughout the season, the plants will abundantly produce others for a long period of time. The rows should be about 24 to 30in. apart, and the plants 3in. apart in the row early in the season, but should later be thinned so that they stand 6in. apart.

LEAF AND HEAD LETTUCE.

All varieties of Lettuce can be classed in two groups, the loose leaf and the head. The former is suitable to grow under glass and also for outdoors in Spring, early Summer and Fall. Lettuce may be sown thickly, and may be pulled as it grows. For the leaf sorts a little crowding will serve to make it more tender. Head Lettuce takes longer to mature, but resists the heat and is good for Midsummer growth. It should be transplanted early in its growth, otherwise the check which it receives upon being taken up later will cause the plants to go to seed rather than head properly.

The head Lettuce is much better to grow than the leaf, and is much more crisp and palatable.

Lettuce is a cool season crop—to mature the best heading varieties start seed early in boxes in the window, or in a hotbed, transplanting into another hotbed or coldframe, or into garden beds as soon as the ground can be worked; space 6in. apart each way. Seed may



Lettuce—One of the easiest to raise of all the Salads. Variety shown is a Head Lettuce.

be sown outside in August for an Autumn crop, and the plants thinned out to stand about 6in. apart in the row.

Garden Delicacies

BRUSSELS SPROUTS.

Brussels Sprouts require about the same culture as the other Kohl crops, with this suggestion that the center of the plants be pinched out when the small sprouts have formed; the larger lower leaves should also be pulled away by degrees, so as to let in the light and increase the size of the sprouts.

CAULIFLOWER.

Cauliflower requires about the same cultural conditions as Cabbage. The plants are greatly benefited by a very rich soil. When the heads begin to form the leaves should be tied together to protect them from the sun, otherwise they will become black and tough. The Cauliflower head is at its best for a short time only, and it should be picked when it is in prime condition rather than allowed to go past its maturity.

EGG PLANTS.

Egg Plants require great heat and, therefore, are started only when the soil and air may be kept warm. There is little advantage in sowing the seeds too early. For best fruits the soil must be light and rich. A dozen plants give an ample supply for a family. Set the plants two to three feet apart according to the richness of the soil. They are troubled with the potato beetle which can be hand-picked or sprayed with arsenate of lead.

ENDIVE.

Endive, culture same as late Lettuce, but the leaves are tied together to cause the center to blanch. The result is a very tasty, slightly bitter salad crop. The plants are nicely wintered in a coldframe so that it may be available throughout the snowy months.

KOHLRABI.

Kohlrabi is much smaller than Cabbage, and may be planted 4in. apart, 12in. between rows. The early crop can be transplanted from a coldframe; sow for later crops where they are to grow. Eat them when they are not over 2in. across.

PEPPERS

They grow well on any soil but prefer a sandy loam. Set the plants fifteen inches apart. It is necessary to choose the type which succeeds best in your locality. There are two main types: the large and mild or Sweet Peppers which are used for stuffing; and the small, strong varieties useful for seasoning and pickles.

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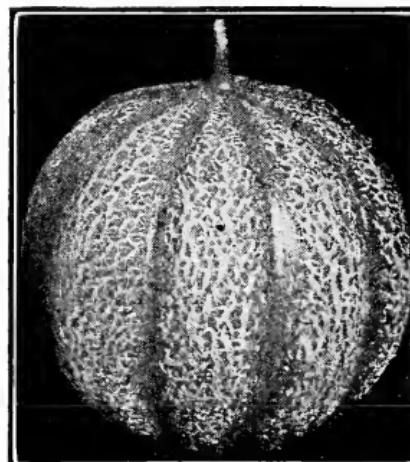
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MUSKMELON.



Muskmelons need room but they are worth it all
in which case the Muskmelons ripen after being picked.

The Muskmelon requires a very rich soil, and each hill should be enriched by a good quantity of decayed manure. The home gardener should start the seeds in paper pots in frames. The plants require a little more space than Cucumbers. Many amateurs forget the fact that a Muskmelon is not ripe until it is soft. They are impatient for this delicious fruit and pick it too soon. When picked before the stem separates nicely from the fruit the home gardener is no better situated than when he buys the Muskmelons from the market,

WATERMELON.

The hills for planting Watermelons should be placed 6 to 8ft. apart; planted as closely as this only three plants should be allowed to grow in each hill. In the Northern states it will be difficult to mature any but the earliest varieties. Watermelons are successfully started in paper pots in a hotbed. A sandy loam soil is preferred for best growth. Certain varieties may be had which are small fruited but better adapted to Northern conditions.

ASPARAGUS.

We advocate a bed of Asparagus even in a very small garden to those who own their homes. There is nothing more healthy and no crop that pays so well for the labor. Raise your own plants from seed, preferably; otherwise buy roots that have not dried out. If roots are to be set out dig your trenches 18in. deep and 2 to 3ft. apart. Tread in 6in. manure, then add 6in. good soil. On this set out your plants, 12in. apart, spreading the roots out evenly. Cover with three or four more inches of soil, and fill in to the level as the plants develop. Cut sparingly or not at all the first year. Cultivate thoroughly but not too deep. Manure freely. Beans, Beets, Carrots or Lettuce can be grown between the rows early in the season. An Asparagus bed, well cared for, will endure for 15 years.

HERBS.

If you can spare a little corner for a few herbs do so by all means. They come in handy for seasoning. Make a selection of varieties from your seedsman's catalog; some are annuals; some perennials; don't let these latter get out of bounds.

It is of decided advantage when a vegetable garden can be handled all in one area; yet, as often happens, when it has to be broken up into two or three separated plots, these can be made just as remunerative and perhaps more attractive. When one owns his own home no time should be lost in setting out various small fruits, as Strawberries, Raspberries, Currants; these can be made to fit into odd spots. A Peach tree or two will be appreciated. A hedge can be made of dwarf Pears. And so on. Study to have something productive in every nook and corner.

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